REMARKS/ARGUMENTS

Claims 1-34 were previously pending in the application. Claims 1, 2, 11, 18, 19, 28, and 35-38 are amended herein. The Applicant hereby requests further examination and reconsideration of the application in view of the foregoing amendments and these remarks.

On page 2, the Examiner rejected claims 1-3, 6, 7, 9-11, 15-20, 23, 24, 26-28, and 32-38 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0136208 ("Skirmont") in view of U.S. Patent No. 6,160,819 ("Partridge"). On page 3, the Examiner rejected claims 4, 5, 13, 14, 21, 22, 30, and 31 as being unpatentable over Skirmont in view of Partridge, and further in view of U.S. Patent Application Publication No. 2004/0228364 ("Walker"). On page 4, the Examiner rejected claims 8 and 25 as being unpatentable over Skirmont in view of Partridge, and further in view of U.S. Patent No. 6,799,224 ("Dellacona"). On page 4, the Examiner rejected claims 12 and 29 as being unpatentable over Skirmont in view of Partridge, and further in view of U.S. Patent No. 5,018,132 ("Williams").

For the following reasons, the Applicant submits that claims 1-38 are allowable over the cited references.

Claim 1, as amended, recites:

> 1. A transmitter coupled to at least two single-channel links of a high-bandwidth link, the transmitter comprising:
>
> at least two registers, each associated with a different single-channel link and each receiving a different portion of user data provided to the transmitter from a module; and
>
> a framer adapted to i) provide the user data from the module as a plurality of packets, each having a packet delineator and based on a packet format, and ii) ensure that **the packet delineators of all of the packets are provided on a common single-channel link**; and
>
> wherein **a common register provides a portion of each packet with the packet delineator to the common single-channel link**, and each register provides a corresponding portion of each packet to an associated single-channel link.

The foregoing claimed configuration is described in the specification, e.g., from p. 4, line 29, to p. 5, line 5, as follows:

> In accordance with embodiments of the present invention, the transmitter forms the packetized data such that a beginning portion of each packet is transferred through the same pipeline channel of a particular one of the single-channel links, such as single channel link 104(1). The packet delineator is employed by framer 106 of receiver section 102 to enable reconstruction of each packet from the single-channel links. Thus, the packet delineator is associated with that particular single-channel link, regardless of the number of other single-channel links that are bonded together to form the high-bandwidth link.

Claim 1 requires, *inter alia*, (i) a framer adapted to ensure that the packet delineators of all of the packets are provided on a common single-channel link and (ii) a common register that provides a portion of each packet with the packet delineator to the common single-channel link. Neither Skirmont nor Partridge teaches, discloses, or even suggests these features.

Skirmont discloses a scheme for mapping data packets between lines of differing capacity at a router interface. (Abst.; paragraph [0006].) As acknowledged by the Examiner in paragraph 2, Skirmont does not disclose a framer for providing a packet having a delineator. In fact, Skirmont makes no mention of the use of packet delineators at all, let alone the transmission of all of the packet delineators on a common single-channel link.

Partridge fails to supply the missing teachings. Partridge discloses a scheme for multiplexing bytes over parallel communications links using data slices. (Abst.; col. 1, lines 9-12.) With reference to the flowchart of FIG. 4, Partridge states that "[a]t step 403, packet delimiters, if not already present, may be inserted into the data stream to separate packets of information. Packet delimiters can be used by the receiver to determine when a complete packet of data has been received." (Col. 8, lines 1-5.) However, instead of ensuring that all of the packet delimiters are provided on a common single-channel link, as required by claim 1, Partridge treats the packet delimiters just as any other portion of a packet being multiplexed over the single-channel links, spreading the delimiters over a plurality of single-channel links: After inserting the packet delimiters into the data stream, Partridge separates the packet stream (at step 404) into subgroups of data bytes which correspond to each of the sublinks (i.e., single-channel links). (Col. 8, lines 12-14.) Next (at step 406), the subgroups of bytes are striped over the sublinks. (Col. 8, lines 19-20.) As detailed in FIG. 5 and described at col. 8, line 37, to col. 9, line 50, in Partridge, the process of assigning data bytes to sublinks is performed completely independently of which bytes contain packet delimiters. Accordingly, as detailed in FIG. 6, upon receipt of the data slices from the sublinks, the packet reconstruction process (step 606) is also performed completely independently of which bytes contain packet delimiters and independently of the particular sublinks over which the packet delimiters are transmitted – and it is not until after the packet reconstruction process that the packet delimiters are identified and removed (at step 607). This is in stark contrast to the feature of the Applicant's claim 1 that requires that all of the packet delineators be provided on a common single-channel link. These packet delineators are all associated with a common single-channel link, regardless of the number of other single-channel links that are bonded together to form the high-bandwidth link. (Specification at p. 5, lines 2-5.) Thus, not only does Partridge fail to disclose (i) a framer adapted to ensure that the packet delineators of all of the packets are provided on a common single-channel link and (ii) a common register that provides a portion of each packet with the packet delineator to the common single-channel link, but Partridge actually teaches away from the use of a scheme in which all packet delineators are provided on a common single-channel link.

In view of the foregoing, the Applicant submits that Skirmont and Partridge do not combine to render the invention of claim 1 obvious. For similar reasons, the Applicant submits that claims 11, 18, and 28 are also allowable over Skirmont in view of Partridge. Since claims 2-10, 12-17, 19-27, and 29-38 depend variously from claims 1, 11, 18, and 28, it is further submitted that those claims are not rendered obvious by Skirmont in view of Partridge. It is submitted therefore that the rejections of claims 1-38 under Section 103 have been overcome.

Claims 2 and 19 recite the insertion of inter-packet fill so that the packet delineator of each packet of a sequence of packets occurs on the common single-channel link. Neither Skirmont nor Partridge teaches, discloses, or suggests the insertion of inter-packet fill for the purpose of providing a packet delineator on a common single-channel link. This is an additional reason for which claims 2 and 19 are allowable over Skirmont in view of Partridge.

Claims 15 and 32 recite the discarding of inter-packet fill. Neither Skirmont nor Partridge teaches, discloses, or suggests the insertion of inter-packet fill at all, let alone the discarding of inter-

packet fill. This is an additional reason for which claims 15 and 32 are allowable over Skirmont in view of Partridge.

Claims 35-38 recite that the provision of the packet delineator of each packet on or from the common single-channel link occurs independently of the sizes of the packets. Neither Skirmont nor Partridge teaches, discloses, or suggests that a common single-channel link on or from which a packet delineator is provided can be independent of packet size. This is an additional reason for which claims 35-38 are allowable over Skirmont in view of Partridge.

In view of the foregoing, the Applicant submits that the rejections of claims under Section 103 have been overcome.

In view of the above remarks, the Applicant believes that the now-pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Respectfully submitted,

Date: 5/26/06

Customer No. 46900
Mendelsohn & Associates, P.C.
1500 John F. Kennedy Blvd., Suite 405
Philadelphia, Pennsylvania 19102

Kevin M. Drucker
Registration No. 47,537
Attorney for Applicant
(215) 557-6659 (phone)
(215) 557-8477 (fax)